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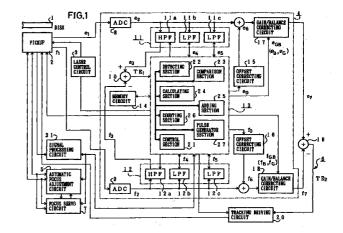
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(54) Optical pickup position control device

(57)An optical pickup position control device according to the present invention automatically adjusts tracking with precision and in a short time. Two deviation signals, which express deviation of a light beam, projected by a pickup which uses the three-beam method, from a target track of a disk, are digitized by two AD converters (8,9). Two high-pass filters (11a,12a) extract from the deviation signals AC signals, producing a tracking error signal. Further, two low-pass filters (11b,12b) extract from the deviation signals DC signals (offset components). Two other low-pass filters (11c,12c) extract from the deviation signals low-band signals containing DC components. Using the various foregoing signals, a control circuit (13) calculates correction values to be applied to two offset correcting circuits (15,16) and to two gain/balance correcting circuits (17,18), and corrections are performed collectively and simultaneously on the basis of these correction values.





EUROPEAN SEARCH REPORT

Application Number EP 98 11 7748

Category	Citation of document with I of relevant pass	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.CL6)	
X		96-12-04)	1-3,10	G11B7/09
X A	17 October 1990 (19 * abstract; figures		1-3,10 4-9, 11-21	
A	EP 0 718 832 A (SOM 26 June 1996 (1996- * abstract; figures * column 4, line 19	-06-26) 1,2,5,6 *	1-21	
P,A	EP 0 831 467 A (THO 25 March 1998 (1998 * abstract; figures * page 3, line 46 -	3-03-25) 3-1,2 *	1-21	TECHNICAL FIELDS SEARCHED (Int.CL6) G11B
A	US 5 351 224 A (NAG 27 September 1994 (* abstract; figures * column 5, line 24	1994-09-27)		
A	US 5 347 503 A (KOY 13 September 1994 (* abstract; figures * column 7, line 10	1994-09-13)	1-21	
	The present search report has			
	THE HAGUE	Date of completion of the search 24 February 2000	Par	iset, N
X : perti Y : perti docu	ATEGORY OF CITED DOCUMENTS icularly relevant if taken alone icularly relevant if combined with and ument of the same category inological background	T : theory or princip E : earlier patent do after the filing de	le underlying the cument, but publi te in the application or other reasons	Invention

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 98 11 7748

This annex lists the patent family members relating to the patent documents cited in the above—mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

24-02-2000

Patent document cited in search report		Publication date	Patent family member(s)		Publication date	
EP	0745981	A	04-12-1996	JP	8329484 A	13-12-199
				ÜS	5953296 A	14-09-199
EP	0392561	A	17-10-1990	JP	3054729 A	08-03-199
				DE	69030017 D	10-04-199
				DE	69030017 T	09-10-199
				KR	9307158 B	30-07-199
				US	5251194 A	05-10-199
				JP	2611849 B	21-05-199
				JP	4019833 A	23-01-19
EP	0718832	Α	26-06-1996	 JР	8180624 A	12-07-19
				CN	1131797 A	25-09-19
				US	5699333 A	16-12-19
				US	5907527 A	25-05-19
EP	0831467	A	25-03-1998	DE	19638879 A	26-03-19
				JP	10116426 A	06-05-199
				US	5986989 A	16-11-19
US	5351224	Α	27-09-1994	JP	3259427 A	19-11-19
				JP	3259428 A	19-11-199
				JP	3260916 A	20-11-199
				US	5481526 A	02-01-19
US	5347503	Α	13-09-1994	JP	1989632 C	08-11-19
				JP	3066031 A	20-03-199
				JP	7021868 B	08-03-199
				US	5404346 A	04-04-199
				US	5517475 A	14-05-199
				US	5532990 A	02-07-199

POPM PO466

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82